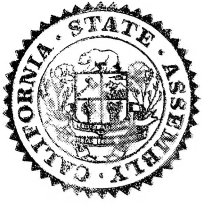


REPORT OF THE
OFFICE OF THE AUDITOR GENERAL

715.2

THE PATENT AND ROYALTY PROGRAM
OF THE UNIVERSITY OF CALIFORNIA

OCTOBER 1977



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October 6, 1977

The Honorable Speaker of the Assembly
The Honorable President pro Tempore of the Senate
The Honorable Members of the Senate and the
Assembly of the Legislature of California

Members of the Legislature:

Your Joint Legislative Audit Committee respectfully submits the Auditor General's report on the patent and royalty program administered by the University of California. Patentable discoveries and inventions are considered by the University as fortuitous by-products, rather than the inevitable results, of scientific investigation. Yet, many of the researchers entitled to royalties are specifically paid by the University to do research.

The Federal Government limits the percentage of royalties to which a salaried inventor may be entitled. Similarly, comparable national universities are not as generous as the University of California. The Auditor General recommends that the University review and reconsider its existing policy with respect to distribution of royalties.

By copy of this letter, the Department is requested to advise the Joint Legislative Audit Committee within sixty days of the status of implementation of the recommendations of the Auditor General that are within the statutory authority of the Department.

The auditors are Kurt R. Sjoberg, Audit Manager; Gary S. Ross; William H. Batt; and Ross Luna, CPA.

Respectfully submitted,

MIKE CULLEN
Chairman

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SUMMARY

The patent program of the University of California is administered by the Board of Patents. The Board is appointed by the U.C. Regents and is comprised of members representing the faculty, Academic Senate and administration. The program's day-to-day activities are carried out by the patent administrator who reports directly to the Board. Royalties are paid by commercial firms which are licensed to manufacture and sell university inventions.

We reviewed the University's royalty distribution policy and compared it to the policies of other institutions involved in research. We also reviewed 21 licensee files, which included the 13 patents that accounted for approximately 80 percent of the royalty income for 1975 and 1976, and tested three of the main licensees' systems for determining royalties due to the University.

We found that:

- The University of California has one of the most generous royalty distribution schedules compared to similar institutions. The net royalty is shared equally with the inventor (see page 7).

- A computation error resulted in an underpayment to the University of \$66,500 in royalty due from one licensee (see page 14).
- Many licensees continually make late payments and ignore repeated payment requests by the University (see page 21).

We recommend that the University reconsider its royalty distribution percentage, review all licensees to ensure that royalty payments are accurate and in compliance, and include penalty provisions for nonpayment or late payment of royalties in future license agreements (see pages 13, 20 and 22).

INTRODUCTION

In response to a resolution of the Joint Legislative Audit Committee, we are reviewing various operations of the University of California (U.C.). This report addresses the U.C. patent and royalty program.

The U.C. patent policy was originally adopted in 1943. The policy and program were revised in 1963 to stimulate more inventions and increase monetary benefits from these inventions.

All matters relating to patents within the University are administered by the U.C. Board of Patents. The 11-member Board is appointed by the U.C. Regents and serves without extra compensation at the pleasure of the Regents. The patent program's day-to-day activities are carried out by the patent administrator who reports directly to the Board.

Under the U.C.'s patent agreement requirements, all faculty, staff and employees of the University are required to promptly disclose all possible patentable ideas to the Board of Patents. Inventions are reviewed for novelty, feasibility and commercial potential, as well as for patent obligations to the research sponsors. However, the ultimate

decision on patentability rests with the U.C. patent counsel and/or the research sponsor. The patent policy revision of 1963 includes a mandatory assignment of all inventions to the U.C. and a provision for a 50 percent royalty division with the inventor.

As of June 1977 there were 108 licensed U.C.-owned inventions. All but one of these inventions are licensed to private commercial firms in the agricultural, industrial, pharmaceutical and engineering fields. These commercial firms pay royalties to the U.C. based on license agreements.

The U.C. maintains a University Patent Fund to accumulate earnings from university-owned inventions. These earnings are invested in the U.C. General Endowment Pool and the interest income derived, together with the receipts and additions to the Patent Fund, is used to finance all patent expenses and to support research and education within the University. In the disposition of any net income earned by the Patent Fund, the U.C. Regents give first consideration to the promotion of research.

Appendix A shows the comparative income and expenditures of the University Patent Fund during the five-year period from fiscal years 1971-72 through 1975-76. At June 30, 1976, the Patent Fund balance amounted to \$2 million. The University maintains the fund at

approximately \$2 million to provide annual earnings of at least \$100,000. These earnings augment current royalty income used to finance research and patent expenses.

As shown in Appendix A, the gross royalty proceeds from licensed inventions for the five-year period ended June 30, 1976 totaled \$2.1 million. Royalty payments to the inventors during the same period amounted to \$556,000, or about 26 percent of the gross income received from royalties. The patent policy states that inventors share royalties equally with the University after 15 percent deduction from gross receipts to cover overhead costs plus the actual patent prosecution and protection costs.

During the five-year period, \$690,000 was also transferred to the State General Fund to support the University's yearly research budget. The amount transferred was equivalent to 25 percent of the University's net royalty income and other earnings of the Patent Fund.

Scope of the Review

We reviewed the University's royalty distribution policy and compared it with the policies of other major universities and research institutions.

We also tested three of the main licensees' systems to determine royalty payments due the University. We found that all three licensees have adequate accounting systems to accurately determine the royalty payments due to the University.

In addition, we reviewed 21 patent licensee files, which included 13 inventions, to determine the accuracy and timeliness of royalty payments as stipulated in the license agreement. These licenses accounted for approximately 80 percent of the University's royalty income for fiscal years 1974-75 and 1975-76.

In reviewing the Patent Administrator's Office, we found that patent and licensee files were maintained in a professional manner with all information readily available.

AUDIT RESULTS

FEW SIMILAR INSTITUTIONS HAVE AS
GENEROUS A ROYALTY DISTRIBUTION SCHEDULE
AS THE UNIVERSITY OF CALIFORNIA

The University of California's policy of distributing royalties to salaried university employees is more generous than the policies of most similar universities and research institutions. As a result, substantial royalty income is available to researchers, above their base university salary, when an invention results as a by-product of their primary responsibility--either research or instruction. For example, in fiscal year 1976-77 the three researchers with the highest royalty incomes more than doubled their university salaries. Further, more than three-quarters of two of these researchers' salaries was paid by the University specifically for research.

The University considers patentable discoveries and inventions as "fortuitous by-products, rather than the inevitable results, of scientific investigation." Research is generally pursued without regard to the patentability of the results. However, there is always the possibility that inventions with valuable commercial applications may result from experiments and investigations originally undertaken for a different purpose.

The University's policy is to use inventions as a source of incidental income to further research on all campuses rather than on just those campuses where lucrative patentable inventions have been developed.

Prior to 1963, the assignment of inventions to the University was optional and some seemingly lucrative inventions were lost. The Board of Patents revised the patent policy in 1963 for the following reason:

The initial identification of an invention is a subjective process. Voluntary identification and disclosure of inventions are very important if an educational institution is to develop and maintain a successful patent program. Regrettably, this cannot be accomplished by fiat. Recognizing this fundamental fact, the Board of Patents recommended revisions in the policy that would provide the necessary incentive to individuals to voluntarily disclose their inventions. Thus, the first major revision of the University's patent policy, since its inception in the Forties, provided for mandatory assignment of inventions and equal sharing of royalty after deduction of 15 percent for overhead costs plus a deduction of all patent prosecution and protection costs.

According to U.C. officials, the number of invention disclosures increased from 35 in 1962 to more than 200 per year in more recent years as a result of the revised policy. Whether this increase was attributable to the sharing formula or the mandatory assignment of inventions is unknown.

Royalty Distribution Schedule

University policy regarding patents states in part:

The Regents agrees, for and in consideration of said assignment of patent rights, to pay annually to the inventor, his heirs, successors, and assigns, fifty (50) percent of the royalties and fees received by The Regents after a deduction of fifteen (15) percent thereof for overhead costs plus a deduction for cost of patenting and protection of patent rights.

The salary and royalty income received during fiscal year 1976-77 by the inventors of the most lucrative patents licensed by the U.C. are listed in the following table. All salaries listed are paid from the State's General Fund.

<u>Invention</u>	<u>Percent of Salary^{a/}</u>		<u>Total</u>	<u>Royalty</u>	<u>Year</u>	<u>Total</u>	<u>Total</u>
	<u>Research</u>	<u>Instruction</u>	<u>Salary</u>		<u>Total</u>		<u>Royalty</u>
							<u>Received</u>
							<u>by</u>
							<u>Inventor</u>
A	-0-	100	\$40,500	\$34,788	\$ 75,288		\$248,017
B	85	15	35,800	77,309 ^{b/}	113,109 ^{b/}		89,974 ^{b/}
C	75	25	27,310	33,610	60,920		235,875
D	No longer with University		-0-	16,065	16,065		129,291

a/ A professor's time is divided between research and classroom instruction.

b/ The inventor has assigned his rights to a U.C. Alumni Foundation.

Other Institutions' Royalty
Distribution Schedules

For comparison with the U.C.'s policy, we obtained the royalty distribution formulas from the following universities:

- Massachusetts Institute of Technology
- Harvard University
- Iowa State University
- Rutgers State University
- Stanford University
- University of Washington
- Texas A & M University
- University of Wisconsin
- California Institute of Technology.

Information regarding patent income for current years was not provided by all of the universities; therefore, it is impossible to evaluate the success of a patent policy based upon income received.

The universities contacted use the following schedules of royalty distribution to the inventor. The universities asked that we not identify a particular university with its schedule.

Royalty Distribution to Faculty

15 percent of net royalty income (two universities)

15 percent of gross royalty income (two universities)

33-1/3 percent of net royalty income

35 percent of the first \$50,000 in accumulated gross royalty income; 25 percent of the next \$50,000 in accumulated gross royalty income; 15 percent of the accumulated gross royalty income thereafter (two universities)

100 percent of accumulated net royalty income of the first \$5,000; 50 percent of accumulated net royalty income of the next \$15,000; 30 percent of accumulated net royalty income over \$20,000

50 percent of net royalty income.

In addition, the Department of Health, Education and Welfare's (DHEW) grants policy limits the amount of royalty a university may share with its inventors. The provision limits the inventor's share of royalty to the following:

50 percent of accumulated gross income to \$3,000

25 percent of accumulated gross income to the next \$10,000

15 percent of accumulated gross income in excess of \$13,000.

Consequently, any inventions resulting from DHEW-funded research at the U.C. cannot be shared with the inventor at the same rate as specified in the University's general policy unless a petition for redetermination by the Department of Health, Education and Welfare has been filed and approved.

We also found that the Western Regional Research Center of the United States Department of Agriculture (USDA) does not pay its inventors royalty income. The USDA's patent assignments are royalty free and nonexclusive and can be assigned to any interested person at any time.

The following table shows the effect on the University's royalty distribution using the lowest and highest (except for the university which also pays 50 percent net) of the other universities' schedules for the five-year period ended June 30, 1976.

University of California:	50 percent of net	\$556,000
Other universities (high):	33-1/3 percent of net	370,667
Other universities (low):	15 percent of net	166,800

Because of their more liberal policy, the U.C. has distributed between \$185,000 to \$390,000 more to individual inventors than would have most of the other universities we contacted.

CONCLUSION

The University of California's policy of sharing 50 percent of net royalty income with the inventor, who is also a salaried university employee, is more generous than the policies of most similar research institutions we contacted. As a result, some researchers have more than doubled their

salaries with royalty income generated from inventions discovered while performing research required by their employment.

We believe that the University's intent in establishing its royalty distribution policy--namely, to ensure that "fortuitous by-products" of research which may have commercial value are disclosed to the University--can still be met without providing a sharing formula greater than that used by most similar institutions.

RECOMMENDATION

We recommend that the University of California reconsider its royalty distribution schedule.

BENEFIT

Any reduction in the present distribution formula would make additional funds available to the University for research.

THE UNIVERSITY'S COMPUTATION ERROR RESULTED
IN A \$66,500 UNDERCHARGE TO ONE LICENSEE

In our audit of three of the main licensees, we found that the University had miscalculated the royalty due from the licensee of the Tomato Harvester, resulting in a \$66,500 undercharge. We informed the U.C. Patent Administrator's Office of this fact and his office, in turn, billed the licensee. On September 2, 1977, the licensee notified the U.C. that they agreed with the findings and stated that payment would be forthcoming.

Tomato Harvester License Agreement

The original license agreement negotiated by the University for the Tomato Harvester invention, dated April 15, 1960, states in part:

2. (a) In consideration of said license [licensee] agrees to pay to Regents a royalty of five per cent (5%) of [licensee's] net selling price of all "Harvesters" sold under the terms of this agreement. Net selling price shall be the price as billed by [licensee], less cash discounts and transportation and shipping costs by common carrier or postage.

The license also provides that the U.C. Regents will be assigned the title to any improvements made to the harvester; specifically, the license states:

5. All improvements to said "Harvester" made by or on behalf of [licensee] during the life of this Agreement shall be promptly disclosed and assigned in writing to Regents, and [licensee], at Regents' request, shall execute all papers required to enable Regents at its expense to file and prosecute patent applications thereon in the name of the actual inventor or inventors, and to place record title in and to said applications and/or any patents issued as the result thereof, in Regents. All such improvements as well as improvements to said "Harvester" otherwise acquired by Regents during the life of this Agreement shall be included in and subject to all of the terms of this license without any increase in said royalty rate.

On October 31, 1969, the Board of Patents considered a request to reduce the royalty provision of the license agreement. At that meeting it was decided that:

Justification for the reduction was based on the fact that the Harvester was to be automated and much of the equipment was to be purchased from other manufacturers.

The Board approved a formula using a flat rate per harvester plus a cost-of-living index increase. The license agreement was not amended at that time, however.

The issue was again addressed at the Board of Patent's December 7, 1971 meeting. Prior to approving the amendment to the license agreement, the Board considered the following factors:

- The University had been criticized in times past for failing to realize more income from agricultural inventions.

- At that time four other companies were manufacturing harvesters, and in order to compete with the market, the licensee had developed a much larger, fully automated and more expensive harvester. The additional cost was attributable to the automated features rather than the basic invention.
- The licensee was to make further substantial investment to improve the harvester. All improvements made by the company would be assigned to the Regents, and royalties would continue to be paid after the original patent expired.
- The harvester was then covered by approximately 25 patents, none of which was solely in the name of university employees. All patents, except for perhaps three, were in the name of licensee employees.
- The licensee had suffered some financial setbacks in the years 1969-1971.

The Board agreed that it was unjust to require the licensee to pay royalties on equipment which was purchased from others to add to the harvester. It was further agreed that the formula approved by the Board in 1969 would resolve the inequity and would also take into consideration the inflationary spiral. The Board reaffirmed its

earlier approval of the formula with the exception of changing the basic index figure from September 1969 to September 1971.

The license agreement was amended on November 7, 1972 to read:

2. (a) In consideration of said license [licensee] agrees to pay to Regents a royalty of not less than One Thousand Dollars (\$1,000.00) per "Harvester" sold under the terms of this agreement. The actual royalty shall be computed annually on the basis of the September "Consumer Price Index For All Items" for the San Francisco-Oakland area, as published by the United States Department of Labor, Bureau of Labor Statistics. The September 1971 price index of 143.6 (100%) shall be the basis for computing royalties and any change in the said price index shall require a like change in the actual royalty payment per "Harvester" sold, but in no event shall the royalty be less than One Thousand Dollars (\$1,000.00) per "Harvester."

All other agricultural license agreements held by the University require a royalty payment of at least five percent of sales of the patented product.

A review of the licensee's consolidated financial statement reveals that the company experienced losses in the years mentioned by the Board (1969-71). Although we cannot determine whether another product line contributed to the loss, the number of harvesters sold in those years was significantly fewer than in the preceding year.

Under the earlier license, the licensee would have paid approximately \$940,000 to the University between 1972 and 1976, as compared to the approximate \$520,000* actually paid.

Cause of the University Miscalculation

The November 7, 1972 amendment to the harvester license agreement changed the manner in which royalty income is computed. It applies the yearly percentage change in the Consumer Price Index to a minimum flat rate per unit sold. The patent administrator obtains the Consumer Price Index figures for September of the current year from the U.S. Department of Labor, Bureau of Labor Statistics. The percentage change for the year is calculated and applied to the basic rate of \$1,000 per harvester sold. The licensee is then notified by the University of the royalty rate per harvester sold during the year.

Our test of the royalty payment records maintained by the University indicated that the Patent Administrator's Office had correctly applied the formula for computing royalty due during 1972 and 1973. However, a computation error in the application of the Consumer Price Index was made in 1974, and that error was repeated in 1975 and 1976. The following table shows the effect of this error on royalty payments for those years.

* Includes \$66,549 which will be paid to the University (see page 20).

SUMMARY OF ROYALTIES PAID AND DUE

Tomato Harvester

Year	Index*	Royalty per Harvester	Harvesters Sold	Royalties Paid	Adjusted Royalty	Balance Due To University
1974	176.7	\$1,230.50	52	\$ 58,398.60	\$ 63,986.00	\$ 5,587.40
1975	192.2	1,338.44	102	115,651.68	136,520.88	20,869.20
1976	202.2	1,408.08	150	<u>171,120.00</u>	<u>211,212.00</u>	<u>40,092.00</u>
				\$345,170.28	\$411,718.88	\$66,548.60

* September 1971 Base Figure: 143.6

We informed the patent administrator of the error and, after verification by the University's internal auditors, a letter was sent to the licensee on August 17, 1977 explaining the error and requesting the additional royalty. The licensee responded on September 2, 1977 stating that their auditors had confirmed the findings and that they would pay the University \$66,548.60 in additional royalty for those years.

CONCLUSION

The University could have lost \$66,500 in royalty income because the calculation on royalty due was not reviewed. This error was repeated three years and would have continued had it not been discovered.

RECOMMENDATION

We recommend that the University's internal auditors periodically review royalty calculations on all license agreements to ensure accuracy and compliance with the license provisions.

BENEFIT

Implementing the recommendation should ensure that errors such as those we found do not recur.

MANY LICENSEES MAKE LATE ROYALTY PAYMENTS

Our review of the royalty payment records maintained by the University indicates that many licensees continually make late royalty payments and ignore repeated payment requests from the University. Since it is U.C. practice to invest royalty receipts to earn additional income, interest earnings are lost because of these delayed payments.

The license agreements between the patent licensees and the University of California Regents contain stipulated payment dates on which royalties are due. Eight of the 21 licensees we tested remitted royalty payments several weeks after their due dates. Most of the overdue payments ranged from one to 19 weeks late. In two instances, however, the remittances were received after more than two years and after repeated requests for payment.

In addition, two of the eight licensees did not submit the required reports covering sales of the licensed products. Another licensee discontinued paying the royalties due from July 1976 through July 1977. This licensee stated that the royalties were being withheld on advice of its patent counsel pending resolution of infringement and invalidity issues with another patent license. The U.C. patent records did not show any action taken by university patent officials to resolve this infringement matter.

The University has no recourse against licensees who are late in paying royalties because the license agreements do not include penalty clauses in the event of nonpayment or late payment of royalties.

CONCLUSION

Presently, the University does not have an effective means of enforcing its royalty payment due dates. As a result, an undetermined amount of interest earnings is lost because of the untimely payment or nonpayment of royalties due from patent licensees.

RECOMMENDATIONS

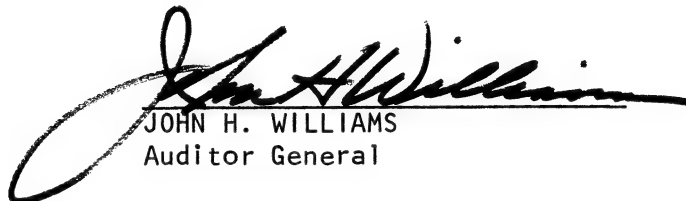
We recommend that the University of California Patent Administrator's Office:

- Include in its license agreements an interest and penalty provision for nonpayment and late payment of royalties due to the University and for the failure to submit timely reports covering the sales of licensed products.
- Take immediate action to clear any infringement issues with the licensees so that royalties accruing to the University are paid as due.

BENEFIT

Implementing these recommendations should save the University the interest income presently lost because of untimely payment or nonpayment of royalties.

Respectfully submitted,



JOHN H. WILLIAMS
Auditor General

Date: September 30, 1977

Staff: Kurt R. Sjoberg, Audit Manager
Gary S. Ross
William H. Batt
Ross Luna, CPA

UNIVERSITY OF CALIFORNIA SYSTEMWIDE ADMINISTRATION

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BERKELEY, CALIFORNIA 94720

September 29, 1977

Mr. John H. Williams, Auditor General
Joint Legislative Audit Committee
925 "L" Street, Suite 750
Sacramento, California 95814

Dear Mr. Williams:

In response to your letter of September 23, I attach a detailed staff analysis setting forth the University's reactions to the audit results and recommendations. There are, however, a number of general comments I would like to make.

First, let me express my appreciation for the discovery by your staff of the error we made with respect to the amount due on one of our major patents. Thanks to that discovery we will be collecting an additional \$66,500 in royalty income.

Secondly, it should be understood that our patent program is an incentive program and that it appears to have worked well. The audit staff suggests that our incentives are too generous; others within the University have suggested they are not generous enough. Given that the present policies are about fifteen years old, it seems to me entirely appropriate that we review them at this time, in light of these various suggestions.

Finally, I would like to express my regret that a more comprehensive response is not possible within the very limited time made available to us for review. It is likely that we will want to amplify our response in due course.

Sincerely,

David S. Saxon
President

Attachment

Analysis of Draft Report of the Office of
the Auditor General on the Patent
and Royalty Program of the University of California

Following is an analysis of the audit results and recommendations as set forth in the Auditor General's draft report on the Patent and Royalty Program of the University of California.

Audit Results

Few other similar institutions have as generous a royalty distribution schedule as the University of California.

Analysis

Although the University's policy on distribution of royalties is labeled "generous," one should look at the results achieved under the policy.

Prior to July 1, 1963, assignment of inventions to the University was optional. Inventors were paid a royalty of 25% of the first \$10,000 of gross royalties, 20% of the next \$15,000, 15% of the next \$25,000, 10% of the next \$50,000, and 5% of amounts over \$100,000. Under this schedule the University distributed royalties without recovery of patent prosecution costs and overhead costs.

The policy as changed on July 1, 1963, made mandatory the assignment of inventions to the University but did not assure disclosure of inventions. Therefore, a necessary incentive in the form of a royalty distribution schedule provided for payment to the inventor of 50% of royalty income after recovery of all patent prosecution and protection costs and deduction of 15% for overhead costs.

Invention disclosures totaled fifty for the 1962-63 fiscal year. In the first year under the new policy, 1963-64, disclosures more than tripled to a total of 163 and have totaled approximately 200 per year in recent years. In 1963 the University had 33 licensed inventions. Today the total is 110. These dramatic increases, the University believes, must be attributed in large measure to the new distribution schedule. It encourages disclosure which, in itself, enhances the benefits derived from the research program, which is the reason the policy was changed to its present form.

A study of the University's patent program by Harbridge House in 1967 and a University survey in 1973 of 24 institutions of higher learning confirmed that the University of California has one of the best administered and most successful patent programs in the country.

Two points should be noted here. First, from the standpoint of individual benefit very few faculty--only those whose inventions are extremely successful--reap any significant financial rewards. Where success has been modest, most inventors would have realized greater benefits from the pre-1963 policy. But the 1963 policy definitely provides greater potential, financially, thus a greater incentive.

Second, University faculty and staff are not hired to make inventions. Disclosing inventions imposes a considerable amount of additional work on the inventors. They must prepare and submit the initial disclosure report which must frequently be augmented by additional data requested by the reviewers, patent counsel and/or sponsors of research. Other faculty members are called upon by the administration to provide detailed analyses of the discoveries to enable determination as to novelty, feasibility, and commercial potential. This service in itself would cost the University thousands of dollars if outside consultants and experts were hired for such preliminary review of disclosure material.

Incentive encourages performance, so in many respects the financial incentive for inventions has to be sufficient to induce disclosure. Indeed the University has received a number of suggestions that the incentives are not sufficient. Whether the University's distribution schedule is too generous or not generous enough is largely a subjective judgment.

Comparisons with other institutions are also difficult. Comparison data used in the report are from a small sample and do not provide a complete picture. For example, in some instances, a lesser percentage distribution paid by another institution is based on gross royalties rather than on net, which might under certain circumstances provide a greater return to an inventor than under the University of California schedule. Also, there is little analysis of the effect at other institutions of policies that differ from those of the University of California.

The fact that the patent and royalty policies of the institutions included in the comparison do not produce income of a level realized by the University of California is not in itself conclusive. The differences in income beg many basic questions, such as comparability of their programs, the number of their investigators, and the size of their institutions. It is felt that looking at similar institutions and settings is important but the difference should be understood. Therefore, based on the analysis presented, the University cannot come to the same conclusions that the report does; namely, that disclosure can be assured without providing a sharing formula greater than that used by most other similar institutions.

Comparison with the United States Department of Agriculture is not valid. The federal government has its own patent policies. The implication is that inventors in the government receive no recompense for patentable disclosures. This is often not the case. The government has a supplemental incentive awards program, operating in most agencies, to recompense inventors and others for significant inventions which are of high utility. This is tantamount to a royalty-sharing program.

Recommendation

We recommend that the University of California reconsider its royalty distribution schedule.

Analysis

Our current policy was established about 15 years ago. It is appropriate that policy be reviewed periodically to determine whether it should continue unchanged or whether revisions are in order. This probably is an appropriate time to review Patent and Royalty policies.

Audit Result

The University's computation error resulted in \$66,500 undercharge to one licensee.

Analysis

We appreciate the Auditor General's discovering the error which resulted in recovery of additional income.

Recommendation

We recommend that the University's internal auditors periodically review royalty calculations on all license agreements to ensure accuracy and compliance with the license provisions.

Analysis

This review will be added to the internal audit schedule. In addition the procedures will be reviewed to determine what controls might be introduced to provide a check on the calculations.

Additional Analysis

It is disturbing to note the amount of detail in this section relating to the license agreement on the tomato harvester, particularly when the presentation concludes with the statements "All other agricultural license agreements held by the University require a royalty payment of at least five percent of sales of the patented product" and "Under the earlier license, the licensee would have paid approximately \$940,000 to the University between 1972 and 1976, as compared to the approximate \$520,000 actually paid" which could lead some readers to the conclusion that the licensee received some special considerations. However, the circumstances

relating to this license and those of other agricultural license agreements are not comparable. The tomato harvester arrangements were complicated by the improvements made by the licensee and the inclusion of items in the harvester on which no patents were held. When items purchased from third parties, such as an electronic sorter, were added to the harvester it was no longer appropriate for the licensee to pay a royalty based on total sales price. Attached is a copy of an opinion from the University Patent Attorney in which he sets forth pertinent law and court decisions relevant to the subject license.

Audit Result and Recommendations

Many licensees make late royalty payments.

We recommend that the University of California Patent Administrator's Office:

- Include in its license agreements an interest and penalty provision for nonpayment and late payment of royalties due to the University and for the failure to submit timely reports covering the sales of licensed products.
- Take immediate action to clear any infringement issues with the licensees so that royalties accruing to the University are paid as due.

Analysis

In many situations of late payments, the licensees involved are very small businesses. These organizations may not have the staffs necessary to handle all their internal administrative matters as promptly as may be theoretically desirable. It is not felt that penalty provisions or any similar provisions would markedly increase the promptness of some of these companies.

As noted in the audit report, the University Patent Administrator continually reminds the late licensees to make payments. Short of terminating licenses there really is not much that can be done in the way of sanctions against these people. Terminations would present the problem of finding replacement licensees and would also likely be counterproductive because it is believed to be in the interest of the taxpayers of the State to keep such businesses viable.

On the infringement issues, the auditor has pointed to one situation in which the licensees stated that royalties were being withheld on advice of patent counsel, pending resolution of infringement and validity issues of another patent licensee. It is correct that the University did not take any action to clear up the infringement matter. If

infringements cannot be terminated by persuasion, the only recourse is litigation. Patent litigation typically runs into hundreds of thousands of dollars of expenses, for, in order to litigate against an infringer, considerable sums must be spent to retain patent counsel and expert witnesses in many fields. The first defense raised by the defendant is that the patent is invalid and this puts the patent "on the line." In a situation in which royalty income is minimal, it is not considered sound business to expose the University to paying hundreds of thousands of dollars and to the possibility of losing the patent in order to gain the few dollars of royalty at issue. The University attempts to resolve all infringement issues by persuasion and negotiation. This is not to say that the University does not litigate in appropriate situations, but that must be decided on a case-by-case basis.

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BOARD OF PATENTS

Miss Josephine Opalka
Patent Administrator
University of California
485 University Hall
2200 University Avenue
Berkeley, California 94720

Re: Opinion Regarding Patent Law
Applicable to Royalty Agreements
of the University of California

Dear Jo:

You have asked our firm to render its opinion regarding the law on the levying and collecting of patent royalties, particularly in connection with licenses such as that between the University and Blackwelders covering the tomato harvester patents.

As we understand the problem in general terms, arguments have been made by some that the royalties exacted from Blackwelders should be calculated on the total sales price of each tomato harvester, whether or not all of the equipment on the harvester is covered by University patents.

It is a fundamental maxim of patent law that a patent licensee is not liable for articles manufactured by him unless they are covered by the patent. 4 Deller's Walker on Patents 2dEd, §415, page 684. In fact, the attempt to exact royalties beyond the scope of the patent grant may, in certain circumstances, constitute a violation of the

Miss Josephine Opalka

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antitrust laws of the United States. The United States Supreme Court, in a leading case on the subject, Zenith Radio Corp. v. Hazeltine Research, Inc., 395 US 100, 89 Sct 1562, 23 LEd2d 129 (1969), has stated:

" . . . conditioning the grant of a patent license upon payment of royalties on products which do not use the teachings of the patent does amount to patent misuse." (395 US at 135)

. . . .

"Among other restrictions upon him, he [the patentee] may not condition the right to use his patent on the licensee's agreement to purchase, use or sell, or not to purchase, use or sell another article of commerce not within the scope of his patent monopoly. . . ."
(395 US at 136)

. . . .

" . . . we discern no basis in the statutory monopoly granted the patentee for his using that monopoly to coerce an agreement to pay a percentage royalty on merchandise not employing the discovery which the claims of the patent define." (395 US at 140)-

The Zenith v. Hazeltine decision distinguished between those royalty licenses which were based on a percentage of the total gross sales of products whether or not covered under licensed patents and which were negotiated for the convenience of the parties, and those licenses on the same basis that were coerced or imposed by the patent owner upon the licensee. In the latter case the Supreme Court held there was clear patent misuse.

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In an illustrative case following the Zenith v. Hazeltine doctrine, Glen Mfg. Inc. v. Perfect Fit Industries, Inc., 324 F.Supp. 1133, 169 USPQ 678 (SDNY 1971) patent misuse was found because royalty licenses were offered on one basis only: that royalties were to be calculated on all products (toilet tank covers) made, whether or not covered by licensed patents. The licensor's stated justification was a supposed requirement of uniformity in licensing; and that uniformity was the very circumstance negating any negotiation and proving patent misuse. In the Glen case, royalties were held to be not recoverable under the license agreement on account of the misuse of the patent.

In the case of the University's tomato harvester license, we believe that any license of this machine which is calculated upon a sales price which includes the expensive electronic sorter feature (patented by a third party supplier to Blackwelders, and not patented by the University) or any other accessories not covered by University patents, would violate the misuse doctrine of Zenith v. Hazeltine. We do not think that Blackwelders would agree to such a royalty arrangement. If the University insisted upon such terms, then it would be safe to say that such agreement would have been coerced or imposed by the University as the patent owner, with the result that the entire license agreement would be in jeopardy and the University embarrassed and possibly held liable for federal antitrust violations.

OWEN, WICKERSHAM & ERICKSON

Miss Josephine Opalka

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September 23, 1977

I hope this letter covers the points you asked about.

If we can be of further assistance, please let me know.

Sincerely,

Robert E. Wickersham

Robert E. Wickersham

i/s

REW:ilf

APPENDIX A

UNIVERSITY OF CALIFORNIA
UNIVERSITY PATENT FUND BALANCES, INCOME AND EXPENDITURES
FISCAL YEARS 1971-72 THROUGH 1975-76
(unaudited)

	Five-Year Total	1975-76	1974-75	1973-74	1972-73	1971-72
Balance, July 1	\$2,328,569	\$1,646,296	\$2,234,043	\$2,172,192	\$2,228,226	\$2,328,569
Add income receipts:						
Royalties	2,129,409	637,109	618,967	395,667	239,745	237,921
Investments	809,172	186,191	190,844	156,392	140,065	135,680
Others	231,194	--	151,304	--	--	79,890
Total receipts	<u>3,169,775</u>	<u>823,300</u>	<u>961,115</u>	<u>552,059</u>	<u>379,810</u>	<u>453,491</u>
	5,498,344	2,469,596	3,195,158	2,724,251	2,608,036	2,782,060
Deduct appropriations and expenditures:						
Income-producing inventions	115,574	29,153	36,173	16,303	23,695	10,250
Non-income-producing inventions	252,789	48,118	52,830	58,901	43,019	49,921
Patent Board expenses	4,320	1,484	716	757	165	1,198
Cash payments to inventors	555,921	163,775	116,339	106,696	84,635	84,476
Research programs:						
Special applied research	213,104	81,408	29,040	35,200	47,256	20,200
Graduate student research (Note 1)	1,215,000	--	675,000	180,000	180,000	180,000
Chancellor equipment fund (Note 1)	450,000	--	450,000	--	--	--
State's share of patent fund income	691,171	145,193	188,764	92,351	57,074	207,789 (Note 2)
Total expenditures	<u>3,497,879</u>	<u>469,131</u>	<u>1,548,862</u>	<u>490,208</u>	<u>435,844</u>	<u>553,834</u>
Balance, June 30	\$2,000,465	\$2,000,465	\$1,646,296	\$2,234,043	\$2,172,192	\$2,228,226

Note 1 These expenditure appropriations were divided equally among the University's nine campuses.

Note 2 This represented the patent fund income shares of the State of California for the fiscal years 1969-70, 1970-71 and 1971-72.

(unaudited)

Office of the Auditor General

cc: Members of the Legislature
Office of the Governor
Office of the Lieutenant Governor
Secretary of State
State Controller
State Treasurer
Legislative Analyst
Director of Finance
Assembly Office of Research
Senate Office of Research
Assembly Majority/Minority Consultants
Senate Majority/Minority Consultants
California State Department Heads
Capitol Press Corps